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§ 231.26 Pushcars.

(a) *Handbrakes.* When used to transport persons, each pushcar shall be equipped with an efficient handbrake so located that it can be safely operated while the car is in motion.

(b) *Handholds (includes handles).* Each pushcar shall be provided with one or more secure handholds. When used to transport persons, each pushcar shall be provided with one or more safe and suitable handholds conveniently located above the top of the bed of each pushcar.

(c) *Sill steps or footboards.* When used to transport persons, each pushcar shall be equipped with safe and suitable sillsteps or footboards conveniently located and securely fastened to car, when bed or deck of pushcar is more than 24 inches above top of rail.

(d) *Couplers.* When moved together with other vehicles, each pushcar shall be equipped with a coupler at each end where such vehicles are coupled (1) which provides a safe and secure attachment, and (2) which can be coupled or uncoupled without the necessity of men going between the ends of the cars.

NOTE: Sections 231.25 and 231.26 are applicable only when the vehicles governed thereby are coupled together and moved together.

§ 231.27 Box and other house cars without roof hatches or placed in service after October 1, 1966.

(a) *Handbrakes.* The handbrake may be of any efficient design, but must provide the same degree of safety as, or a greater degree of safety than, the following specifications:

(1) *Number.* (i) Each box or other house car without roof hatches shall be equipped with an efficient vertical wheel handbrake which shall operate in harmony with the power brake thereon.

(ii) The handbrake may be of any efficient design, but must provide a total braking force applied to brake shoes not less than the total force applied to the brake shoes by the brake cylinders at 50 pounds per square inch.

(2) *Dimensions.* (i) The brake wheel may be deep or shallow, of malleable

iron, wrought iron, steel, or other material of equivalent strength.

(ii) Overall diameter of brake wheel nominally twenty-two (22) inches.

(iii) Depth of brake wheel hub shall be two and five-eighths (2 $\frac{5}{8}$) inches with square taper shaft fit, taper two (2) inches in twelve (12) inches with small end of taper fit seven-eighths ($\frac{7}{8}$) inches.

(iv) Brake wheel and drum shall be arranged so that both will revolve when applying and gradually releasing the handbrake. Handbrake shall be provided with means to prevent application of the brake by winding in a counterclockwise direction.

(v) Brake shaft shall be arranged with a square fit at its outer end to secure the handbrake wheel; said square fit shall be not less than seven-eighths ($\frac{7}{8}$) of an inch square. Square-fit taper: Nominally two (2) in twelve (12) inches (see Plate A).

(vi) All chains shall be not less than nine-sixteenths ($\frac{9}{16}$) inch BBB coil chain.

(vii) All handbrake rods shall be not less than three-fourths ($\frac{3}{4}$) inch diameter.

(3) *Location.* (i) The handbrake shall be so located that it can be safely operated from horizontal end platform while car is in motion.

(ii) The brake shaft shall be located on end of car, to the left of and not less than seventeen (17) nor more than twenty-two (22) inches from center and not less than twenty-six (26) nor more than forty (40) inches above top of end-platform tread.

(4) *Manner of application.* (i) Brake wheel shall be held in position on brake shaft by a nut on a threaded extended end of brake shaft; said thread portion shall be not less than three-fourths ($\frac{3}{4}$) of an inch in diameter; said nut shall be secured by riveting over or by the use of a locknut or suitable cotter.

(ii) Outside edge of brake wheel shall be not less than four (4) inches from a vertical plane parallel with end of car and passing through the inside face of knuckle when closed with coupler horn against the buffer block or end sill.

(iii) Handbrake housing shall be securely fastened to car.

(b) *End platforms*—(1) *Number.* Two (2).